Draft Pedestrian Neighborhood Regulations

4.3.2012

Overview

The purpose of this proposed regulation is to promote higher density, energy-conscious, people-centered developments within the existing framework of predominantly automobile-centered zoning. This "pedestrian neighborhood zone" (PNZ) is designed as a "floating zone" to be overlaid onto parcels within existing zones in urban, sub-urban and rural contexts, and potentially serve as a guideline for developing PUD's and other types of "planned development areas". It has been written to be applicable to subdivisions as small as 4 houses, but also as large as a village. The PNZ is meant to be a "surgical insertion" where higher or focused density is deemed appropriate by a municipality, or as a model for new development. Presented here will be core principles, key definitions and standards for a PNZ. Also included will be a description of variations based on the context in which the subdivision is sited.

A pedestrian zone is built around the spatial scale of the human, not around the spatial needs of the automobile. As such, all pedestrian zones will have a similar scale *internally*, regardless of context. The context (urban, sub-urban or rural) will determine primarily how the subdivision relates to the outside world, and will have only minimal effect on the rules governing its internal organization. Variations between contexts will include parking requirements, setbacks to neighboring properties, buffer requirements, and the like.

Purpose and Applicability

The guiding concept governing the form and layout of any pedestrian zone is that it be easily useable, spatially contiguous and perceived as a coherent whole *by the pedestrian*. If the person experiencing the built environment views it as a coherent whole, the sense of place, feeling of belonging and experience of community is enhanced. The overarching goal of enhancing community is the basis for pursuing the following principles:

Transit-accessible location. A PNZ is a clustering of homes expected to have a high enough population density to foster community interaction as a minimum, and as such will have a high concentration of people requiring mobility. To minimize the need to rely on the private motor vehicle for most if not all trips, PNZs are most optimally located in areas already served by public transit and which have other connections to already developed areas, such as bike trails and walking routes. Urban infill locations are the best sites for PNZs, however in suburban or rural settings, PNZs should be located along primary transit routes, in close proximity to already developed areas, and where road and utility infrastructure already exists to serve them.

Shared outdoor space. Shared space is at the heart of creating the experience of community, therefore all buildings in the PNZ would be connected by some kind of shared outdoor space accessible to all residents and generally open to the public. In smaller PNZs (4-12 homes) this could be a single shared yard (as in the Aurora Dwelling Circle Climate Showcase Community), whereas in larger developments it could expand into a pedestrian street or greenway (as in the EcoVillage TREE Climate Showcase Community), and in village-scaled developments it would likely become a network of car-free streets and squares. Buildings would front on this shared people-centered space, not necessarily on vehicular roads. The shared space itself however, would have some form of frontage on or be accessible from vehicular roads, to facilitate intermittent emergency & delivery vehicle access to all buildings within the PNZ.

Perimeter parking. The primary means by which human connectedness is enhanced and buildings are brought closer together in a PNZ is through the exclusion or conscious management of the automobile. In suburban, and even "New Urbanist" neighborhoods, the excessive space required to bring the car up to every building pushes buildings too far apart for human relations that promote a higher level of trust and resource-sharing than the typical neighbor relationship. The commitment of resources to excessive automotive infrastructure also hinders community economic viability and sustainable land use. The spatial disruption that the car's movement imposes on pedestrians shatters tranquility, impacts safety, and destroys the experience of shared space. Therefore in an urban context, parking would be on-street or at the edge of a project, with most PNZ developments being contained within the existing urban block structure. In

suburban and rural contexts, small developments might have perimeter parking lots, and larger village sized developments could have structured perimeter parking and even internal shuttle services. In a PNZ, one would expect to walk to one's residence from a parking area or transit stop, and to reap the benefits of car-free public space as a result. *mantra: "Welcome to our neighborhood, please check your car at the door"*. In addition, the exclusion of vehicular traffic and parking internal to the PNZ will make all thoroughfares MORE accessible to emergency vehicles, despite providing a narrower width of paving.

Permeable boundary. It is essential that PNZs not occur as gated or spatially isolated communities. In the same way that vehicular roads are open to the public for the purpose of passing through a built up area or visiting particular buildings fronting on those roads, the pedestrian pathways of the shared outdoor space serve the same purpose, and in this sense are considered public rights-of-way, though not for people in vehicles. As such, they must be arranged as a logical path network, with multiple connections to existing vehicle-accommodating public rights of way.

The building architecture should also reflect this "non-gated" philosophy. In an urban context, PNZs would offer views from a city street into the shared space and public pedestrian pathways, a welcoming architectural expression, and facades that address the city street in some positive way. In a sub-urban and rural context, the concept of the permeable boundary would suggest the existence of an obvious path for visitors to approach and feel welcome, a "connective" relationship to main vehicular roads, and a sympathetic relationship between the built form and the natural surroundings. With respect to the relationship between a PNZ and a roadway, municipalities will need to determine whether the built form should abut the road, so as to create a kind of "Main Street" environment, or whether it should be set back to create a "farmstead" type of setting. This choice will depend on the municipality's shared vision.

Built Perimeter. In the rural and sub-urban contexts where a true built context does not exist, the PNZ needs to amalgamate its buildings on the land such that *as a group*, they are perceived as a single entity, whether forming a significant edge along the main road or as an entity set back from the road. This will allow the PNZ to be perceived from outside as a single destination, and thus enhance the experience of it as a place in the larger landscape. The perception of the PNZ as a *single destination* is critical to the success of perimeter parking and simultaneously to the acceptance of walking to one's goal inside it. When approaching in a car (or arriving by transit), the visitor will feel a more powerful sense of arrival if met by a built perimeter, with a simultaneous feeling that the car is un-necessary from that point of arrival forward, because an image of the place as a whole can be readily grasped. Individual buildings should therefore not stand out as destinations until a visitor is on foot and traversing the pedestrian path network of the community.

Human Dimensions. The typical assumptions as to the optimal size of building lots, widths of streets, yards and setbacks, and overall sizes of communities, which are currently defined by the needs and capabilities of automobiles and a high-consumption society fueled by cheap energy, will be significantly downsized in the PNZ.

- The street: The purpose of the street within a PNZ is primarily for the movement of people, not vehicles, and is a social space which contributes significantly to community identity. Therefore its design parameters will reflect this purpose, with the street becoming narrower overall, and pavements being reduced only to what is needed for emergency or incidental vehicle access.

- Lot sizes: Lot sizes affect the walking distance between buildings, and can impose social separation if too large. Large lots also put fewer uses and architectural events between the starting and ending points of a walk, making walking a less interesting and therefore less desirable experience. The effect of too-large lots makes a community feel "thinned out". Therefore there will be minimum AND maximum lot sizes and frontages, depending on the intended building type for a particular location within the neighborhood. The intent would be to achieve an optimum density for social connectedness and land conservation, while maintaining appropriate aesthetics, fire separations and emergency access. Related to lot size, building size and block lengths will also be smaller than what we have come to view as normal in the 20th century.

- Neighborhood size: Beyond a 5-10 minute walk (1/4 – 1/2 mile) a neighborhood begins to get too large to be connected by foot travel alone, i.e. people feel that getting across it is "too far to walk", and may feel the need for mechanical mobility, especially in inclement weather. In a car-oriented

world, the “neighborhood” can be any size traversable by car or other machinery. However, since a PNZ consciously eliminates the car as a mobility option, attention must be paid to having key services and amenities, including access to mechanical means of mobility, at appropriate walk intervals. In addition, sufficient population to support whatever amenities are made available must be housed within walking distance of those amenities. This may suggest not only a *maximum* size for a neighborhood, but also a *minimum* density.

- Use zones: A PNZ is not limited to being a single use zone, depending on its size. Small urban infill sites may be single use in nature, i.e. residential cottage developments, pedestrian retail areas, etc. However as a PNZ increases in size, perhaps approaching a village scale, it will need to design areas within its layout which are appropriate to certain mixed uses, for example locating commercial space closest to a primary vehicular road, perimeter parking area, transit stop or community park. Given the pedestrian scale and slower speed of travel within the PNZ, variation in uses and building types can and must happen faster than is typical of the scale of automobile infrastructure, resulting in a finer grain of use variation that offers more convenient access for the person on foot.

Land preservation. The PNZ is a tool that preserves natural and agricultural landscapes in 2 different ways, depending upon whether it is employed in an urban or sub-urban/rural context.

In the urban context, the PNZ offers a way to *increase* overall density, either as infill or as an entirely new neighborhood. Municipalities may want to increase overall density for a number of reasons, such as to provide a better ridership base for transit, to maximize the efficiency of existing services and infrastructure, to improve street life, to achieve the resident base to support businesses, or to increase tax base. Regardless of the internal reason for increasing density in urban neighborhoods, the effect regionally will be to soak up housing demand and reduce development pressure on land outside the urbanized area.

Though densification within urbanized areas is more cost effective and energy efficient, urban living may not be desired by every household, especially if the household derives its income from agricultural activities, and many will continue to choose ex-urban locations. In the sub-urban/rural context, the PNZ offers a way to *focus* density, and thus preserve open space directly, even if what is built doesn’t achieve village scale. Use of the PNZ would create well-defined compact places with closer neighbor relationships that would make resource sharing easier, reduce the impacts of ex-urban living, and still offer access to views and open space typically associated with “country life”.

Contiguous development. It is possible that several properties could be designated by a rural or sub-urban municipality as being worthy of the “focused density” which can be created using the PNZ regulations. These properties may be clustered around a transit stop, located near existing development or an employment center, or be otherwise suitable to be thought of as a “node”. When PNZs are planned on parcels adjacent to other parcels where PNZs are also permitted, the perimeter setbacks typically required in suburban and rural situations should be eliminated, such that developments on adjacent parcels can be linked so as to form a seamless pedestrian realm.

In a situation where a single parcel is allowed a PNZ, and complies with all setbacks required by the underlying zone, but finds itself adjacent to another parcel *later* allowed to host a PNZ, the setback area between the 2 parcels should be filled-in with new development so that a seamless pedestrian realm can emerge between the existing and new developments. The layout of the later PNZ would need to align itself with the existing. Further reasoning behind the aforementioned “permeable boundary” is to leave opportunities for edges to “grow connections” to future pedestrian areas.

It is important to avoid the creation of small density islands that cannot coalesce into a larger “village” environment. It is also important to understand that connections between developments through “green gaps” do not create the kind of pedestrian experiences that reinforce a sense of “one place”. Connections that host human activity and buildings (i.e. pedestrian streets) are necessary to weave a built environment into a seamless whole.

Municipalities must also seriously assess the locations for such development, with access to existing public transit being one primary consideration, and the ability of a group of PNZs to grow into a viable cohesive village node with a population of about 3000 people being another.

Resident Governance. Because of the compact and intimate "village-like" nature of the built environment offered by PNZs, some degree of resident management should be encouraged. Publicly accessible pedestrian rights-of-way within each subdivision may not necessarily be Town/City maintained infrastructure. Building maintenance and open space management, as well as the management of lighting, shared energy systems, and other shared infrastructure and amenities, may require residents to organize around these tasks and could provide the foundation for community-building activities.

The PNZ will most typically be organized using private lots with fee-simple ownership of each lot (with its own internal subdivision regulations), suggesting the use of a home-owners' association for general governance. However within a larger PNZ, cooperatives may group homes on single lots within the village fabric (i.e. dwelling circles or cohousing subject to the definitions of each), and multi-unit buildings could be built as condominiums. Entire PNZs themselves could also be organized as land trusts, cooperatives or condominiums, instead of fee-simple subdivisions. A governance structure should therefore be adopted which best fits the land tenure model chosen by the residents or the developer.

Definitions

These definitions, which may differ from identical terms used in the general ordinance, shall apply only within the areas designated by the municipality as PNZs.

Pedestrian Neighborhood Zone (PNZ). A floating zone designation allowing for the subdivision of land such that building lots front on and are accessed via public or private rights of way which exclude or limit mechanized vehicular traffic, which has a physical scale built around human dimensions, and which has a physical arrangement which optimizes foot travel within its boundaries.

Pedestrian Pathway. A publicly accessible way which does not accommodate motorized vehicles. (note that this is distinct from a "sidewalk" which is generally an optional accessory on a vehicular street)

Multi-mode Pathway. Similar to the Dutch *woonerf*: A publicly accessible way which is designed to allow incidental vehicular access, such as for delivery trucks, trash pickup and emergency vehicles, but where pedestrians and cyclists have legal priority over vehicles.

Vehicular Street. A publicly accessible way internal to the PNZ designed to support local vehicular traffic, bicycle traffic and pedestrian traffic, short term-vehicle parking, long-term parking for disabled residents, and providing access from main roads to long-term parking areas, loading facilities, transit stops and other vehicle dependent functions within the PNZ. Such streets shall not be designed to carry through traffic.

Emergency Access-way. A publicly accessible way, intended primarily for emergency vehicles, connecting main roads to the internal multi-mode pathway network.

Village Residential District (VR). Portion of a PNZ characterized by individual 1-3 story buildings set back from lot lines. This type of district exhibits typically North American "residential" or "village" architecture (i.e. pitched roofs, wood detailing etc). Commercial activity in VR would typically serve resident needs and generate minimal visitor traffic.

Urban Mixed-use District (UM). Portion of a PNZ characterized by 2-5 story buildings typically built up to the front lot line and frequently built out to the side lot lines. This type of district exhibits typically North American "urban" or "Main Street" architecture (i.e. masonry facades, flat roofs with cornice lines, etc). Commercial activity in UM would serve resident needs, yet also be expected to attract visitors. This type of district will therefore have a higher level of access to transit stops and parking facilities.

Dwelling Unit Equivalent (DUE). For the purposes of calculating amount of open space "per dwelling unit" a dwelling unit containing more than 4 bedrooms shall be counted as 2 units. A single room occupancy residential building, group home or cooperatively shared residence shall provide required open space "per dwelling unit" for every 4 bedrooms.

Dwelling Circle. A group of 4 to 8 dwelling units, contained within one-family and two-family structures, arranged around a semi-public "Common Open Space" (defined in this section) measuring no less than 30

feet in any direction and opening onto a multi-mode pathway or vehicular street for a minimum width of 15 feet, on a parcel of land under single ownership organized as a cooperative or mutual housing association under NYS law, and managed by its residents. Dwelling circles may also include shared indoor spaces accessible to all residents (i.e. workshops, root cellars, recreation rooms, storage areas, common kitchens, laundries, etc) which are built into the one and two family structures but which are not part of any particular dwelling unit. Building placement within a dwelling circle lot shall be regulated by fire code, and the provision of "transition" and "common" open space as defined in this section and designated in area standards below.

Cohousing Cluster. A group of 8 to 40 dwelling units, contained within one-family, two-family, and multi-family structures, arranged around a semi-public "Common Open Space" (defined in this section) measuring no less than 30 feet in any direction and opening onto a multi-mode pathway or vehicular street for a minimum width of 15 feet, on a parcel of land under single ownership organized as a cooperative or mutual housing association under NYS law, and managed by its residents. Cohousing clusters typically include a "Common House" (defined in this section). Building placement within a cohousing cluster lot shall be regulated by fire code, and the provision of "transition" and "common" open space as defined in this section and designated in area standards below.

Common House. A *non-public* structure for the use of residents of a cohousing cluster, which is owned by the residents, and may include but is not limited to: a kitchen, meeting room, guest rooms for resident use, a workshop, a play room for resident children, an exercise room, administrative offices, a mail room, a computer or business center, bathrooms, storage space, a community deck or patio, community pool, community greenhouse, apartments, or other such facilities for use only by the resident owners and their guests.

Common Open Space. Outdoor space accessible to all residents of a cohousing cluster or dwelling circle opening onto a public way for the purpose of visitor, resident and emergency access to dwelling units, and for recreational and social use by residents. Does not include open space required by building setbacks to adjacent lots or properties.

Transition Open Space. The outdoor space between the common open space of a cohousing cluster or dwelling circle and the front entry of a dwelling unit within a dwelling circle, or a dwelling unit or multi-unit building entrance within a cohousing cluster. Transition open space does not include a front porch, if provided.

Neighborhood Services. Services and/or facilities, which may be publicly or privately provided, that assist residents in meeting the needs of daily life within walking distance, such as child and elder care, social services, clinics, schools, religious & secular meeting spaces, fitness centers, etc.

Public House. A *neighborhood commercial* structure which may be privately or cooperatively owned, offering some combination of "common house" amenities, commercial activity and community services to residents and the public at large, including but not limited to: a community kitchen, meeting rooms, bed & breakfast, eatery, a workshop, child care center, an exercise room, administrative offices, a mail room, a computer or business center, public bathrooms, storage space, a community deck or patio, community pool, community greenhouse, apartments, or other such facilities.

Lot. Parcel of land upon which the owner has exclusive right to build, within regulations. This parcel may be owned outright as a separate property, or be a portion of a single commonly owned property upon which the owner holds a proprietary lease as in a land trust or cooperative. Lots shall not include conservation open space (as defined in this section) in their area

Built Perimeter. The contiguous edge defined by the outermost vertical building walls, or other structures greater than 4' high, facing adjacent properties.

Perimeter Setback. The setback from adjacent properties which are not part of the PNZ, to the nearest allowable building within the PNZs built perimeter. This setback dimension will most frequently be determined by the requirements of the zone into which the PNZ is inserted, and be inclusive of other required setbacks.

Front Yard Setback. Setback required from the public right of way to a building edge greater than 4' high, including the front porch.

Side Yard Setback. Setback required between adjacent properties perpendicular to a public right of way.

Private Open Space. Outdoor spaces on a lot for the exclusive use of residents occupying that lot.

Public Open Space. Spaces *inside* the built perimeter of the built-area of the PNZ, bounded by buildings on at least 3 sides, which are NOT pathways. These areas include but are not limited to: paved public squares, linear public green-spaces parallel to pathways (wide r.o.w.) small wooded plots, public gardens, community food gardens, playgrounds, grassy recreation areas, etc. It does *not* include conservation open space as defined in this section.

Conservation Open Space. Spaces *inside* the built perimeter of the built-area of the PNZ which are NOT pathways and include un-buildable land, such as land with greater than a 25% slope, land within 100' of streams, designated wetlands, standing water, etc, or other land with natural features that preclude building, but which cannot be entirely avoided by the neighborhood layout.

Rural Open Space. Undeveloped, recreational, agricultural (inclusive of community gardens), wooded, wildlife preservation or other form of land adjacent to and accessible to the residents of a PNZ *in an exurban context*, which is preserved by the clustering of buildings. Rural open space does not include public open space, conservation open space, pedestrian ways or other open space *inside* the built perimeter of the PNZ, nor does it include land required for the perimeter setback from adjacent properties. A minimum requirement for rural open space will be set forth in the standards, however a municipality may already require some form of conservation land in its underlying zoning which may be greater than this minimum.

Neighborhood Commercial Space. Building area, typically though not necessarily on the ground floor, serving the needs of residents within walking distance. Such space should generate limited visitor traffic from outside the neighborhood.

Underlying density. The number of dwelling units allowed on a parcel by the underlying zoning, prior to designating the parcel a PNZ, used to determine the maximum number of dwelling units allowed in the PNZ. This density can be increased at the discretion of the municipality depending upon planning goals.

Pedestrian Zone Standards

Permitted Uses

Village residential district (VR)

- One and Two family structures
- Home occupations
- Dwelling circles*
- Cohousing Clusters*
- Apartment buildings consistent with a residential aesthetic and containing less than 10 dwelling units, or 16 single room occupancy units.
- Transit facilities
- Public Houses (limited to 6,000sf footprint)
- Community services and neighborhood commercial spaces less than 4,000sf per building, in the absence of a UM district.

* 3-unit buildings are allowed in Cohousing Clusters and Dwelling Circles. Common Houses with apartments are allowed in Cohousing Clusters, can be 4 stories (35' to eave + roof pitch), and contain up to 10 apartments or 16 SRO's. Common houses are limited to a 6,000sf footprint.

Note that any building over 30' must be accessible to aerial fire apparatus. The r.o.w. standards that follow mandate required clearances at intersections of multi-mode pathways, but may not necessarily allow for the placement of buildings in excess of 30' high mid-block. It is recommended that apartment buildings 4 stories high be located on corner lots.

Urban mixed-use district (UM)

- Multi-family dwellings
- One and two family row-houses
- Office
- Retail
- Restaurant
- Dwelling circles and Cohousing
- Community services
- Public assembly facilities (theatres, churches, conference halls, etc)
- Educational facilities
- Light manufacturing (by special permit)
- Warehousing (by special permit)
- Transit facilities
- Parking garages (by special permit, subject to design review)

Used not permitted

In any district:

- Drive through service windows for restaurants, banks or any other establishment.
- Automobile fueling stations (unless a component of a structured parking facility)
- Car washes or other automobile maintenance services (unless a component of a structured parking facility)
- Vehicle dealerships
- Heavy industry or any other activity requiring excessive vehicle traffic, or lot areas in excess of the maximums designated in the area standards.

Area Standards

Parameter	Village residential district	Urban mixed-use district
Front Yard (min/max)	10' / 20'	0' / 10' *
Rear Yard	10'	10'
Side Yard	5' each side, 20' max**	0'
Lot area (min/max)	2,000sf / 3,400sf per building**	1,200sf / 20,000sf per building
Lot Coverage (min/max)	30% / 50%	80% / 100% incl. internal courtyards
Lot Frontage (min/max)***	30' / 50' per detached building**	20' / 150'
Building Height	3 stories (25' eave + roof pitch)**	5 stories + roof access & mechanical
Private open space (min/max)	300sf / 2400sf per building	None required
Public open space (min/max)	5% / 15% of space inside built perimeter	10% / 25% of space inside built perimeter
Rural open space****	area equal to space inside built perimeter	area equal to space inside built perimeter
Common open space *****	350sf per D.U. 30' min dimension	150sf per D.U. 30' min dimension
Transition open space *****	200sf per D.U. 8'min to porch	None required

* Up to a 10' "feature setback" will be allowed for façade projections such as bay windows that provide architectural interest. In areas where row-houses are proposed, this setback may be used for steps & stoops, with the first stair riser being placed at the front property line. All row-houses on a given block should be set back the same distance, so as to form a continuous street-wall at the actual building front.

** Exceptions

- side-by-side 2 family houses or zero-lot-line configuration: Side yard setback may be 0' on one side. Combined lot frontage of 2 zero lot line units may not exceed total building width plus 20' on interior lots, and total building width plus 30' on corner lots, and in no case exceed 80'. Minimum lot area may be reduced to 1500sf per unit.

- Apartment buildings and buildings incorporating community services or neighborhood commercial space may have lot frontages up to 150'. All setbacks must be 10' min/20' max, except that side and rear yard setbacks immediately adjacent to a residential lot will be 15' minimum. Lot area limited to 15,000sf and building footprint limited to 6,000sf, including porches (40% lot coverage max.). 4 story height allowed (35' to eave + roof pitch)

*** All lots fronting only on a pedestrian pathway must be within 150' of a multi-mode pathway for emergency & utility access purposes. Building heights on such lots in both districts are limited to 30'.

**** Applies in exurban contexts only. Minimum shown shall be superceded by any open space requirements of the underlying zoning

***** For cohousing or dwelling circles only

notes:
lot areas: 2000sf lots limited by setbacks to less than 50% coverage, set up for cottages or small 2 fam houses. Setbacks and 30' min lot width insures 600sf open space per 2 family home. 3400sf lots can accommodate 1700sf footprint for large S fam or 2 fam homes. Goal is to keep houses and yards small so as to place emphasis on public spaces.

setbacks 10' from r.o.w. to porch is sufficient to create public/private transition. 20' gets too far from road so it becomes a max. 5' sides assure fire separation of 10'. 20' side maximum designed to avoid gaping holes in the streetscape. rear yard is minimized so as to focus activity on front porches and public pathways. Larger recreational areas are mandated as public open space and rural open space.

public open space requirements. Less open space percentage is required in village residential districts because setbacks themselves offer open space. Greater percentage is required in street-front districts because of the closed feeling which can result from taller closer facades. There is a maximum so as to prevent the "hollowing out" of a district with too much empty and un-used space. Large tracts of open space should be relegated to rural open space outside the built perimeter.

cohousing and dwelling circle open spaces. In village residential district, this is based on ADC, EVI and Pocket Neighborhood standards. In urban mixed-use districts, it is assumed that cohousing would take the form of courtyard apartment buildings or row-houses sharing backyards, which in both cases do not require separate transition space standards (as row-houses have a direct front-door relationship to the street, and apartment buildings have D.U. entries off internal hallways. The common space requirement assures a minimum size for collective backyards or a common courtyard.

Density Standard

Village residential (VR) districts shall have a minimum density of 10DUE per acre, and a maximum of 20DUE per acre.

Urban mixed-use (UM) districts shall have a minimum density of 15DUE per acre, and a maximum of 40DUE per acre.

Parking requirements

In ex-urban settings: parking shall not be located more than 500' from the main entry of any building within the PNZ. Parking requirements shall be 75% of the requirement of the underlying zoning (or at the discretion of the municipality). Land set aside for additional parking, (reserve parking) with a pre-approved plan for its construction if needed, may be requested by a municipality.

In urban infill settings: parking shall not be located more than 500' from the main entry of any building within the PNZ. Parking requirements shall be 75% of the requirement of the underlying zoning (or at the discretion of the municipality). Urban infill sites which are adequately served by transit and other mobility options could dispense with parking at the discretion of the municipality.

note: experience at EVI, a suburban location, has concluded that though the Town required 2 spaces per dwelling unit, in practice the actual demand for parking has been less than 1.5 spaces per D.U. (a documented reduction of 25%). This is likely due to the degree to which its design fosters cooperation and resource sharing among residents.

Bike Parking requirements

VR Districts: 2 bike locking rings (suitable for 4 bikes) for visiting bicyclists shall be located in the public right of way within 250' of every building. It is assumed that the bikes of residents will be accommodated on their properties. Common houses, public houses, and other uses serving the community shall provide additional bike parking to accommodate the expected number of visitors, with a minimum of 4 locking rings (8 spaces) provided. Apartment buildings shall comply with UM district requirements.

UM Districts: 5 bike locking rings (suitable for 10 bikes) for visiting bicyclists shall be located in the public right of way every 150'. Indoor residential bike parking (doubling as seasonal storage) shall be provided in all buildings at the rate of one space per bedroom. A commuter shower and changing room (which may be incorporated in a toilet room) shall be provided in buildings containing office uses, and additional bike parking may be required for office uses at the discretion of the municipality.

The estimated amount of retail ground floor space per 300'X300' block bisected both ways with pedestrian passages is approximately 80,000 sf. At one space per 1000sf, 20 spaces would be needed on each side of the block. It is assumed that 2 groups of 10 spaces would be placed near each end of the block, hence a standard of 5 rings per 150'.

Transit access requirements.

Besides meeting the distance requirements set forth in the Subdivision Standards, the PNZ shall be located on its site and internally arranged so as to minimize the walking distance to available transit stops. Safe pedestrian linkages to transit shall be constructed as necessary, and transit shelters shall be provided. Signage directing residents and visitors to the PNZ to and from transit stops shall also be provided. An agreement with the municipality, outlining which parties are responsible for seasonal maintenance of the pedestrian connection to transit stops must be established as part of the PNZ development plan.

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Governance standards (TBD)

Building standards

Fire safety. Due to the limited size and design speed along Pedestrian Pathways, all buildings in village residential districts and row-houses in street-front districts shall be fitted with residential sprinklers. All other buildings in street-front districts shall be fitted with commercial sprinkler systems.

Energy conservation. Because part of the inspiration behind this subdivision regulation is the conservation of energy and long-term energy security, every building constructed as part of a PNZ shall be designed to use no more than half the overall energy as a building of similar size and configuration designed to meet current energy codes. This may be achieved through any combination of improvements to the building envelope, improvements in mechanical systems, on-site renewable energy, or through innovative public/cooperative infrastructure systems. This requirement will be a condition for granting approval for pedestrian neighborhood zone designation (PNZ).

Design Standards (TBD)

PNZ Subdivision Standards

These standards supercede any other subdivision standards of the municipality, within the PNZ.

Right-of-way standards

In village residential (VR) districts:

Type	R.O.W. width	Pavement width	Sidewalk Width	Speed limit
Pedestrian Pathway	5' min – 15' max*	5' min – 8' max	N/A	N/A
Multi-mode Pathway	26' min – 36' max	12' – 26' max**	N/A	5 mph
Vehicular Street	48' min – 56' max	28' min – 36' max***	5' green belt + 5' walk on both sides	15 mph

In urban mixed-use (UM) districts (note: buildings are constructed to the right of way line):

Type	R.O.W. width	Pavement width	Sidewalk Width	Speed limit
Pedestrian Pathway	10' min – 30' max*	5' min – 8' max	N/A	N/A
Multi-mode Pathway	36' min – 50' max	18' min – 26' max**	N/A	5 mph
Vehicular Street	50' min – 58' max	30' min – 38' max***	10' both sides	20 mph

* R.O.W. for a pedestrian pathway which is the only access to a lot must be 15' wide and cannot exceed 300' in length (i.e. 150' from the nearest multi-mode pathway) Building heights on lots fronting pedestrian pathways are limited to 30'.

** To insure working area around fire fighting equipment and space for pedestrians and incidental vehicles to move aside for the passage of emergency vehicles, a level open area of 20' (26' at fire hydrants per NYS fire code) must be maintained free of swales, shrubs, vegetation over 8" in height, or permanent structures such as raised planting beds, benches etc. A permeable paved area every 150' should be provided for incidental non-emergency vehicles (i.e. for deliveries of large items) to park temporarily while maintaining an 11' travel lane for emergency access. **Any pathway with a general pavement width under 20' shall be designated as "one-way' for motorized vehicle travel.**

*** Paving minimums for vehicular streets assume on-street parking on one side, with maximums accommodating parking on both sides if desired. Travel lanes should not exceed 10' width in VR districts and 11' width in UM districts, so as to reinforce adherence to the required speed limit. One-way streets may have a minimum paving width of 20', provided that paved area near fire hydrants complies with applicable codes (NYS requires 26' pavement width for a distance of 40' centered on the hydrant).

Paving standards

Accessibility. Paving materials and grading of pathways, including sidewalks on vehicular streets, shall comply with ADA standards such that at least one accessible route is available to serve the main entries of all buildings in the PNZ. If pathways cannot be graded to make all buildings accessible, publicly accessible chair lifts, elevators or other means shall be provided to achieve this level of access. Gravel or grass-paved vehicular driving and parking aisles are permitted, however multi-mode pathways must have at least a 5' width of ADA compliant paving material that cannot be disturbed or displaced by incidental vehicular traffic, and vehicular streets must have 5' minimum of ADA compliant sidewalk paving material on each side of street, as well as ADA compliant crosswalks at intersections.

Stairways. A pedestrian pathway may include a stairway, provided it is not the sole path of access to a building. If the slope of a pathway exceeds 1:20 (5%) it shall be designed as an ADA compliant ramp. If it exceeds 1:12 (8.33% grade), intermittent ADA compliant stairs with handrail on one side shall be required as part of the pathway.

Traffic calming. Vehicular streets and multi-mode pathways may incorporate rough surfaced materials so as to discourage high vehicle speeds, however a minimum 5' width of bicycle friendly paving must be provided. Speed bumps, which seriously disrupt passage by emergency vehicles, are not permitted.

Permeability. Paving materials shall generally be permeable so as to minimize surface runoff. If not permeable, bio-swales and rain gardens shall be incorporated in the public right of way.

Repair-ability. It is preferred that pavement be modular and re-settable (i.e. concrete or brick pavers, etc) especially over utilities, so that buried infrastructure can be serviced with minimum intrusion from heavy construction equipment.

Aesthetics. Paving shall employ patterns, colors and textures appropriate to a pedestrian scaled environment. (i.e. designs should avoid large expanses of asphalt or concrete without joints or color variations). Gravel or similar granular paving shall be bounded by curbs, or other structured site-work elements, so as to contain the material within the designed width of the surface.

Emergency vehicle access: Paving on all rights of way except pedestrian pathways must be of sufficient strength to support emergency vehicles (75,000 pounds) and of sufficient width to allow its safe passage. **Any pathway with a pavement width generally under 20' wide shall be designated as "one-way' for motorized vehicle travel.** Beyond the paving, within the public right of way, there must be a level area of 20', (and 26' at fire hydrants per NYS fire code) contiguous in elevation with the paving area (not separated by raised curbs or other abrupt elevation changes), maintained free of swales, shrubs, vegetation over 8" in height, or permanent structures such as raised planting beds, benches etc. This is to insure space for the stepping aside of pedestrians and/or pulling over of incidental vehicles to allow passage of emergency vehicles, and to provide adequate access area around an emergency vehicle for responders to utilize emergency response equipment.

Pavement Radii: At all intersections of vehicular streets and/or multi-mode pathways, pavement and right-of-way shall be provided so as to accommodate turning movements for emergency vehicles. This typically requires an outside radius of 50'. Right of way may expand at intersections to offer public open space, or be shaped so as to follow the required radii.

Dead Ends

No pathway within a PNZ may be a dead end. If a multi-mode pathway or vehicular street must terminate (i.e. as a cul-de-sac) pedestrian pathways must extend from the vehicular dead end to other pathways in the zone, such that no pedestrian feels trapped and a contiguous network of walking/biking routes is formed. Dead-ending of any pathway accommodating vehicles is discouraged because of the inordinate amount of space and paving necessary to provide an adequate turnaround (tee or cul-de-sac) for emergency vehicles.

If a pathway is intended to be a connection to a future area of development, its pavement and hosting of lot frontages shall be terminated at the nearest crossing pathway, and its extension shall be planned such that the right of way can be used as public open space until future development occurs.

Access distances

Access distances given are the maximum walking distance from the main entry of a building to the main entry or edge of a particular feature

Block length is measured from property line to property line between 2 successive public rights of way (as opposed to center line to center line of R.O.W.)

Feature	Distance to	Maximum Walk time (250ft/min)
Transit stop	2500' maximum	10 minutes
Parking area	500' maximum	2 minutes
Public open-space	300' (600' apart) maximum	1.2 minutes
Rural open-space	1250' maximum	5 minutes
Multi-mode pathway	150' (300' apart) maximum	.6 minutes
Vehicular Street	1250' maximum, but spaced no less than 600' apart.	5 minutes
Block length	300' maximum	1.2 minutes

notes:

multi-mode pathways (emergency routes). The 150' limit to main entrances will prevent numerous small buildings from being located on long narrow pedestrian pathways. It also insures a +/-300' spacing between parallel emergency access routes.

block length. limitation works with maximum lot sizes to guard against "monster buildings" and long boring facades.

walk-times. To make PNZ's work psychologically, the car and transit must be perceived as being "readily available". Therefore walk times are the primary determinant of distance to transit and parking. For parking, walk time is set at 2 minutes maximum. Though a walk of over 5 minutes to a any mechanized mobility mode is generally considered "inconvenient", and a 5 minute walk time to transit is preferable, the maximum to transit was extended to 10 minutes (2500ft) due to the current fiscal inability to extend transit service to some locations where this type of development is deemed appropriate.

Parking area standards

Open lots for resident and visitor parking: Open lots are expected to be commonly used in conjunction with developments incorporating only the VR district. The standards below will generally allow for the provision of 2 cars per DUE for VR districts reaching the maximum density of 20DUE/acre.

Size of parking space	9' x 18'
Width of driving aisle	22'
Maximum allowable area per space	300sf
Maximum area per open lot	6,000sf
Minimum space between lots	100'
Maximum parking lot site coverage	20% of built perimeter

Parking structures: It is expected that if a development incorporates a UM district, the required parking will exceed the maximum allowed in open lots. Exceptions to this would be developments sited close to transit and other mobility options, or as infill in an existing urban environment, where the parking requirements per DUE are lower, or on-street parking or other public parking facilities exist. To be economically feasible, parking garages may need to be constructed that exceed the maximum lot area and dimensions for the UM districts. Given that garages should be sited along the perimeter of such districts and that liner buildings are expected to shield the garages from the pedestrian spaces of the district, this may not produce a serious negative effect, however parking garages will be subject to specific design review. As such, the following are guidelines, not strict requirements.

Size of parking space	9’ x 18’ clear of structural supports
Width of driving aisle	22’
Maximum allowable area per space	300sf plus ramps if not a sloped floor garage
Maximum size of garage	37,500sf (longest side 250’)*
Minimum space between garages	500’
Liner building depth (required on 2 sides)**	20’ minimum (except sides facing outside built perimeter)
Ground floor façade occupied by garage ***	33%
Maximum height	5 parking levels above first story including open rooftop
Maximum vehicles per garage	460

* Underground portions of a garage may exceed these dimensions.

** The liner building is intended to screen the inside of the built perimeter from the street-deadening effect of exposed parking structures. Possible uses for such narrow space include but are not limited to: art studios, apartments, linear office suites, hotel rooms, etc. With a maximum dimension of 150’ it is expected that at least 120’ will be needed for 2 double-loaded parking aisles. This leaves only 30’ for the liner, implying that liner on all sides would make efficient parking layouts impossible. The developer is given the choice of prioritizing which 2 sides to apply the liner. Other faces of the garage should be aesthetically integrated with the liner building facades.

*** As much ground floor as possible should be used for commercial purposes to minimize the grade level impact of the garage. Exposed garage faces should be screened by pleasing facades, and vehicle entries should occupy no more than 28 lf of façade area.

Lighting Standards

In VR districts, porch lighting may serve as the primary pathway lighting along pedestrian pathways, which are narrow enough to be lit in this manner. Any porch lights which are the only pathway lighting may be considered part of public infrastructure and tied to a community meter as street lighting. This lighting should be controlled by photocell and minimal in intensity. Additional resident controlled porch lighting should be provided so that a resident may choose higher levels of illumination during active porch use.

In UM districts, pathway lighting should be building mounted and respect “dark-skies” concepts. Where rights of way are too wide for building mounted illumination, or in the case of large public squares or parks, pole mounted cutoff fixtures respecting “dark-skies” concepts may be used.

Multi-mode pathways in all districts shall be illuminated with pole mounted cutoff fixtures respecting “dark-skies” concepts. Lighting systems may be resident maintained and tied to community owned alternative energy systems.

Green Infrastructure Standards (TBD)

Pathway signage (TBD)

Utilities

All utilities shall be accommodated underground within the public right of way. Where possible, utilities shall not be located beneath paving, so as to limit the need to rebuild paving after repairs and thus reduce the time period during which the neighborhood is disrupted by construction noise and equipment.

In Urban mixed-use districts where buildings are abutting, utility tunnels accessible from the basements of buildings are encouraged, thus eliminating the need for street disruption and the intrusion of construction equipment for utility work. These tunnels may be within the public right of way, or incorporated on the individual lots with one side collinear with the r.o.w. boundary. Such “on-lot” tunnels shall be accompanied by a 3 dimensional easement allowing utility access below ground level, while allowing the lot owner to build above the tunnel.

Solar Access.

Neighborhood layout and building design (especially in VR districts with pitched roofs) should insure that the maximum number of individual rooftops have a southern exposure (i.e. with ridges running east/west). Building spaces should also be arranged to maximize passive solar gain, without sacrificing urban form or the relationship of interior spaces to outdoor neighborhood social spaces. Land may also be set aside (as part of rural open space) for community owned ground-mounted solar energy systems.